ISSUES

Combined Federal Effort
Environmental Impact Statement/Environmental Impact Report

To insure the highest levels of public safety protection, Folsom Dam and associated structures must be strong enough to withstand the various types of forces and stresses created by a significant earthquake, storm or seepage event. The forces which may act upon the Dam are described in technical terms. As Californians, we are familiar with the SEISMIC forces which can impact the dam during an earthquake. From a HYDROLOGIC standpoint, dams must be able to safely pass the largest inflow considered probable, without the water eroding or otherwise failing the dam. STATIC refers to the very remote possibility of water slowly seeping through the earthen embankments. If undetected this seepage could weaken the structure.

The combined Federal effort is the investigating action to address these issues. The Study Team will evaluate various remedies for each concern in the Draft EIS/EIR and group the preferred solutions into one package for review in the Final EIS/EIR.

HYDROLOGIC

A number of design combination options are under consideration to address hydrologic issues including a dam raise, an auxiliary spillway, modifications of the existing outlets or a tunnel. Examples of design options include:

CONSTRUCT AUXILIARY SPILLWAY. An Auxiliary Spillway is proposed to be constructed on the left abutment of the Main Folsom Dam. Construction would require the excavation and removal of significant quantities of earthen material and placement of concrete erosion protection surfaces and retaining walls.

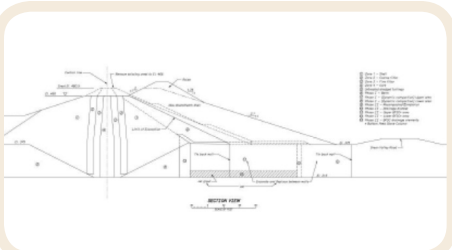
RAISE DESIGN. This alternative option would raise all retention facilities including earthen and concrete structures. Earthen structures would be raised to a yet to be determined additional height. Options include, but are not limited to, structure walls placed along the crest, retention walls along the crest, raise of entire embankments from downstream toe to new crest height, and concrete parapet type walls atop concrete structure.

SEISMIC

A number of design combination options are under consideration to address seismic issues including a downstream overlay, jet grouting and/or replace the foundation at MIAD and installation of tendons and/or shear keys at the concrete dam. Examples of design options include:

REINFORCEMENT OF THE MAIN FOLSOM DAM (Concrete Section of Folsom Dam) Modifications may be made to increase the stability of the main dam. Alternatives include, but are not limited to, reinforcement of pier and gate structures as well as increasing shear resistance of foundation and lift lines by caissons or cable tie down alternatives and/or additional concrete placement.

STABILIZATION OF MORMON ISLAND AUXILIARY DAM (MIAD). MIAD is founded upon potentially liquefiable materials. Modification alternatives may include, but are not limited to, excavation and replacement of the foundation materials in question or stabilization of materials with jet grouting, shear walls, dewatering and overlay alternatives.



STATIC

A number of design combination options are under consideration to address static issues including installation of filter and drain elements to prevent material movement should a internal leak develop and go undetected

FILTERS AND DRAINS. Modifications may include the installation of additional filter(s), drains and protection zone(s) on multiple earthen structures including the dikes, wing dams, and MIAD. This alternative may require placement of earthen or human-made materials within or on the upstream or downstream face of embankments.